

AMENDMENT UNDER 37 CFR § 1.111
Serial No. 09/992,410

AMENDMENTS TO THE DRAWINGS

Proposed drawing amendments are submitted with respect to Figure 2 of the drawings, along with replacement formal drawings incorporating these amendments.

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REMARKS

A total of 23 claims are pending in the present application. The foregoing amendments are presented in response to the Office Action mailed July 27, 2005, wherefore reconsideration of this application is requested.

By way of the above-noted amendments, independent claims 1 and 17 have been amended to emphasize that each shelf of the cross-connect comprises a respective independent pointer processing state machine, and further to define that at least one of the sub-streams is modified "to emulate a conventional Synchronous Transport System (STS) concatenation with sufficient accuracy to enable successful pointer processing through a shelf". Claim 3 has been cancelled to avoid redundancy in view of amended claim 1. Claims 4 and 5 have been amended to reflect the revisions in claim 1. Claims 10, 18 and 23 have been amended to correct typographical errors identified therein. Pages 7 and 20 of the specification, and the abstract have been amended to correct typographical errors identified therein. Finally, FIG. 2 of the drawings has been amended to correct a reference numeral.

In preparing the above-noted amendments, careful attention was paid to ensure that no new subject matter has been introduced. In particular, support for the above-noted amendments in claims 1 and 17 is found in the originally filed specification. See, for example, page 10 line 28 through page 11, line 2; and page 13-line 13 through page 15, line 13 (especially, page 15, lines 8-13).

Referring now to the text of the Office Action:

- the abstract and specification have been objected to in view of typographical errors identified therein;
- FIG. 2 of the drawings has been objected to;
- claims 10, 18 and 23 have been objected to because of typographical errors identified therein;

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- claims 1 and 17 stand rejected under 35 U.S.C. § 102(e), as being unpatentable over the teaching of United States Patent No.6,693,904 (McKenzie et al);
- claims 2, 3, 18 and 20 stand rejected under 35 U.S.C. § 103(a), as being unpatentable over the teaching of United States Patent No.6,693,904 (McKenzie et al) in view of United States Patent No. 6,822,975 (Antosik);
- claim 4 stands rejected under 35 U.S.C. § 103(a), as being unpatentable over the teaching of United States Patent No.6,693,904 (McKenzie et al) in view of United States Patent Application Publication No.2003/0189925 (Wellbaum);
- claims 13, 14, 16, 21, 22 and 23 stand rejected under 35 U.S.C. § 103(a), as being unpatentable over the teaching of United States Patent No.6,693,904 (McKenzie et al) in view of United States Patent No. 6,917,630 (Russell);
- claims 15 and 24 stand rejected under 35 U.S.C. § 103(a), as being unpatentable over the teaching of United States Patent No.6,693,904 (McKenzie et al) in view of United States Patent No. 6,917,630 (Russell) and further in view of United States Patent Application Publication No.2003/0189925 (Wellbaum);
- claim 19 stands rejected under 35 U.S.C. § 103(a), as being unpatentable over the teaching of United States Patent No.6,693,904 (McKenzie et al) in view of United States Patent No. 6,822,975 (Antosik), and further in view of United States Patent Application Publication No.2003/0189925 (Wellbaum); and
- claims 5-12 stand objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form and including all limitations of the base claim and any intervening claims

As an initial matter, Applicant appreciates the Examiner's indication of allowable subject matter in claims 5-12. The Examiner's rejection of claims 1-4 and 13-24 are believed to be fully traversed by way of the foregoing amendments and further in view of the following comments.

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As noted by the Examiner, United States Patent No. 6,693,904 (McKenzie et al) teach a bit-sliced switch fabric, in which an input signal is split by a demultiplexer 102 into a plurality of sub-streams, each of which is mapped through a respective switch 104 to an output multiplexer 105. At paragraph 16 of the detailed action, the Examiner extrapolates from McKenzie's reference to byte-sliced architectures, to argue that "frame-sliced architectures are possible". Even if such an extrapolation of McKenzie is valid, which applicant does not accept, it does not meet the limitations of the claimed invention. In particular, even in the Examiner's frame-sliced architecture, McKenzie provides no teaching or suggestion of an independent pointer processing state machine in each switch 104, nor any teaching or suggestion of modifying at least one sub-stream to emulate an STS concatenation. None of the other known prior art references provide the missing teaching. In particular:

United States Patent No. 6,822,975 (Antosik) teaches a system for rate-adapting between higher-rate and lower rate STS signals. At FIG. 2, Antosik shows that lower-rate STS signal demuxed from a high-rate signal can be mapped through a cross-connect. However, all of Antosik's signals, whether they are high-rate or low rate signals) are native STS signals. Antosik does to teach or suggest modifying a sub-stream to emulate an STS concatenation.

States Patent Application Publication No.2003/0189925 (Wellbaum) teaches a system for transparent flexible concatenation, in which concatenated signals (e.g. STS-4c signals) are modified to emulate non-concatenated STS-1 signals for transport. A concatenation table is populated and shared between the transmitting and terminating ends of the communications path to enable the original concatenated signal to be recovered. Clearly Wellbaum does not teach or suggest modifying a sub-stream to emulate an STS concatenation, but rather teaches the very opposite – modifying an STS concatenation to emulate a stream of non-concatenated frames.

In light of the foregoing, it is respectfully submitted that the presently claimed invention is clearly distinguishable over the teaching of the cited references, taken alone or in any combination. Thus it is believed that the present application is in condition for allowance, and early action in that respect is courteously solicited.

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If any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this response, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 19-5113.

Respectfully submitted,
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